

From gjones@tenet.edu Tue May 02 10:10:29 1995  
Received: from Alice-Thurman.tenet.edu (Alice-Thurman.tenet.edu [198.213.2.5]) by dingus.n5lyt.datarace.com (8.6.10/8.6.9) with ESMTP id KAA07822 for <tapr-bb@tapr.org>; Tue, 2 May 1995 10:10:26 -0500  
Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.11/8.6.9) id KAA02381 for tapr-bb@tapr.org; Tue, 2 May 1995 10:10:25 -0500  
From: Greg Jones <gjones@tenet.edu>  
Message-Id: <199505021510.KAA02381@Alice-Thurman.tenet.edu>  
Subject: [TAPR-BB:80] Problems with TAPR FTP via web pages? (fwd)  
To: tapr-bb@tapr.org (TAPR-BB mailing)  
Date: Tue, 2 May 1995 10:10:25 -0500 (CDT)  
X-Mailer: ELM [version 2.4 PL23]  
Content-Type: text  
Content-Length: 1812

Sender: Howard Goldstein <hg@penny.n2wx.ampr.org>  
Subject: Problems with TAPR FTP via web pages?

Been brought to my attention that some folks are having trouble webbing into TAPR's ftp site from the link on the web page.

If you know of this problem, or better yet, if you have this problem, please email me and be sure to mention the browser used and the error received.

Thanks

Howie

--

Howard Goldstein  
N2WX

hg@n2wx.ampr.org  
<http://www.tapr.org/~n2wx/>

From gjones@tenet.edu Fri May 05 09:23:39 1995  
Received: from Alice-Thurman.tenet.edu (Alice-Thurman.tenet.edu [198.213.2.5]) by dingus.n5lyt.datarace.com (8.6.10/8.6.9) with ESMTP id JAA10380 for <tapr-bb@tapr.org>; Fri, 5 May 1995 09:23:36 -0500  
Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.11/8.6.9) id JAA20616 for tapr-bb@tapr.org; Fri, 5 May 1995 09:23:34 -0500  
From: Greg Jones <gjones@tenet.edu>  
Message-Id: <199505051423.JAA20616@Alice-Thurman.tenet.edu>  
Subject: [TAPR-BB:83] Cheap Flights (fwd)  
To: tapr-bb@tapr.org (TAPR-BB mailing)  
Date: Fri, 5 May 1995 09:23:34 -0500 (CDT)  
X-Mailer: ELM [version 2.4 PL23]  
Content-Type: text  
Content-Length: 1706

Sender: dwolf@tcet.unt.edu (Dave Wolf)  
Subject: Cheap Flights

If you are planning on attending the Digital Communications Conference in September, the time to book your air travel is NOW. The summer fare war is on and the prices are right. The current crop of pricing is good for travel thru Sept 15, so the timing is perfect for the DCC.

Book those flights now and we hope to see you at the DCC Sept 8-10 in Arlington, Texas. The ARRL Digital Communications Conference is co-sponsored by TAPR and the Texas Packet Radio Society.

73 de Dave W05H

From gjones@tenet.edu Mon May 22 14:29:17 1995  
Received: from Alice-Thurman.tenet.edu (Alice-Thurman.tenet.edu [198.213.2.5]) by dingus.n5lyt.datarace.com (8.6.10/8.6.9) with ESMTTP id OAA07429 for <tapr-bb@tapr.org>; Mon, 22 May 1995 14:28:51 -0500  
Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.11/8.6.9) id NAA24478 for tapr-bb@tapr.org; Mon, 22 May 1995 13:28:49 -0500  
From: Greg Jones <gjones@tenet.edu>  
Message-Id: <199505221828.NAA24478@Alice-Thurman.tenet.edu>  
Subject: HF Digital Communications in the Amateur Service  
To: tapr-bb@tapr.org (TAPR-BB mailing)  
Date: Mon, 22 May 1995 13:28:48 -0500 (CDT)  
X-Mailer: ELM [version 2.4 PL23]  
Content-Type: text  
Content-Length: 10197

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D. C. 20554

In the Matter of	)	PR Docket No. 94-59
	)	
Amendment of Part 97 of the	)	RM-8218
Commission's Rules Concerning	)	RM-8280
HF Digital Communications in the	)	
Amateur Service.	)	

REPORT AND ORDER

Adopted: April 17, 1995                      Released: April 27, 1995

By the Commission:

I. INTRODUCTION

1. On June 13, 1994, we adopted a Notice of Proposed Rule Making (Notice) in the above-captioned proceeding. In the Notice, we proposed to authorize automatic control of stations transmitting digital emission types on the High Frequency (HF) amateur service bands, subject to two conditions for such operation. The automatically controlled station must either be connected to another station that is under manual control, or the automatically controlled station must transmit within a subband designated for this purpose. In this Report and Order, we adopt the proposed rules.

## II. DISCUSSION

2. In response to the Notice, we received nineteen comments and one reply comment. The comments ranged from recommending that automatic control not be authorized under any condition to recommending that automatic control be authorized unconditionally. They confirmed generally that the amateur service has a need for stations to transmit digital emission types on the HF bands while under automatic control. The comments also established that there is concern that such transmissions could cause interference to other communications. The comments, however, generally agree that the conditions proposed will provide the necessary degree of protection against such interference. They indicated, moreover, that the desired communications can be carried out under the conditions proposed.

3. Except for temporary authority we issued to permit a feasibility study directed by The American Radio Relay League, Inc. (ARRL), automatic control has not been authorized on the HF bands. Heretofore we have considered immediate action by the station control operator as necessary to avoid causing interference to the communications of other amateur stations transmitting on an HF band. A station transmitting on an HF band usually demands greater attention by its control operator than does a station transmitting on Very-High Frequency (VHF) and higher frequency bands because HF radio wave propagation is long range and changes often. The comments, however, indicated that such operation is practical on the HF bands when the automatically controlled station is simply responding to interrogation by a station having the control operator at its control point or when the station is transmitting on a channel located within a small subband designated for that purpose.

4. The ARRL supports the proposal. It states that absent consensus in the comments, we should take the compromise approach reflected in the rules as proposed. It contends that authorization of automatic control will result in greater flexibility in experimentation and development of digital communications as well as facilitate adaption of existing digital technologies to practical use. In another comment that

strongly supported automatic control, however, Colby states that establishing and maintaining communications on a shared HF channel is no different than it is on a shared VHF channel, and opposes any conditions on automatically controlled amateur stations beyond those now required in the VHF bands. The ARRL argues that additional conditions proposed are necessary because any automatically controlled station transmitting in a crowded shared HF band involves a substantially increased risk of interference. Other comments also express concern with an increased risk of interference. Further, they oppose the establishment of subbands as a solution to the interference concern because subbands would significantly reduce the available spectrum for stations transmitting other emission types.

5. Automatic control of stations transmitting digital emission types enables amateur operators to utilize high-speed computer-based message technology for the rapid and accurate relaying of messages and data. For this reason, we conclude that there has been demonstrated a need for stations in the amateur service to transmit on the HF bands under automatic control. Such operation will result in greater flexibility in experimentation and development of digital communications.

6. We do recognize the concerns of those who oppose the proposal on the basis of potential interference, and in response to these concerns we are limiting when automatic control can be employed. First, the control operator of the station that is connected to the automatically controlled station must prevent the automatically controlled station from causing interference. Second, we are designating subbands to which transmissions between two automatically controlled stations are confined. These subbands are a small portion of the spectrum otherwise available for digital emission types. We also are confident in the ability of the amateur service community to respond, as it has in the past, to the challenge of minimizing interference with novel technical and operational approaches to the use of shared frequency bands.

7. Requiring automatically controlled stations to transmit only in the designated subbands when communicating with another automatically controlled station, furthermore, will not reduce the HF spectrum available for other emission types. The bandwidth of the transmissions of an automatically controlled station will occupy no more than 500 Hz, and the subbands represent only 3.8 percent of the HF spectrum authorized to the amateur service. Other than Morse telegraphy, only digital emission types are currently authorized for the specified subbands. Nothing in the rules that we are adopting prohibits other stations from continuing to share these subbands.

### III. CONCLUSION

8. In summary, we are amending the amateur service rules to

authorize automatic control of amateur stations. To lessen the possibility of inadvertent interference, the automatically controlled station either must be connected to another station that is under manual control, or the automatically controlled station must transmit only within a subband designated for communications between automatically controlled stations. We believe these rule changes will allow the amateur service community to contribute to communication technology and to advance its communication and technical skills consistent with Section 97.1 of the Commission's Rules, 47 C.F.R. 97.1. We see this action as fundamental to our commitment to provide maximum flexibility to the amateur service community. Therefore, we will amend the amateur service rules as set forth in the attached Appendix.

#### IV. ORDERING CLAUSES

9. Accordingly, IT IS ORDERED that effective July 1, 1995, Part 97 of the Commission's Rules, 47 C.F.R. Part 97, IS AMENDED as set forth in the Appendix hereto. Authority for this action is found in Section 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i) and 303(r).

10. IT IS FURTHER ORDERED that this proceeding IS TERMINATED.

11. For further information, contact William T. Cross of the Wireless Telecommunications Bureau, Private Wireless Division, (202) 418-0680.

#### FEDERAL COMMUNICATIONS COMMISSION

William F. Caton  
Acting Secretary  
APPENDIX

Part 97 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

#### Part 97 - Amateur Radio Service

1. The authority citation for Part 97 continues to read as follows:

Authority citation: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609, unless otherwise noted.

2. Section 97.109 is amended by revising paragraphs (d) and (e) to read as follows:

97.109 Station control.

\* \* \* \* \*

(d) When a station is being automatically controlled, the control operator need not be at the control point. Only stations specifically designated elsewhere in this Part may be automatically controlled. Automatic control must cease upon notification by an EIC that the station is transmitting improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the EIC.

(e) No station may be automatically controlled while transmitting third party communications, except a station transmitting a RTTY or data emission. All messages that are retransmitted must originate at a station that is being locally or remotely controlled.

3. A new Section 97.221 is added to Subpart C To read as follows:

97.221 Automatically controlled digital station.

(a) This rule section does not apply to an auxiliary station, a beacon station, a repeater station, an earth station, a space station, or a space telecommand station.

(b) A station may be automatically controlled while transmitting a RTTY or data emission on the 6 m or shorter wavelength bands, and on the 28.120-28.189 MHz, 24.925-24.930 MHz, 21.090-21.100 MHz, 18.105-18.110 MHz, 14.0950-14.0995 MHz, 14.1005-14.112 MHz, 10.140-10.150 MHz, 7.100-7.105 MHz, or 3.620-3.635 MHz segments.

(c) A station may be automatically controlled while transmitting a RTTY or data emission on any other frequency authorized for such emission types provided that:

(1) The station is responding to interrogation by a station under local or remote control; and

(2) No transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz.

From gjones@tenet.edu Tue May 23 12:26:50 1995  
Received: from Alice-Thurman.tenet.edu (Alice-Thurman.tenet.edu [198.213.2.5]) by dingus.n5lyt.datarace.com (8.6.10/8.6.9) with ESMTP id MAA17446 for <tapr-bb@tapr.org>; Tue, 23 May 1995 12:26:44 -0500  
Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.11/8.6.9) id MAA12775 for tapr-bb@tapr.org; Tue, 23 May 1995 12:26:41 -0500  
From: Greg Jones <gjones@tenet.edu>  
Message-Id: <199505231726.MAA12775@Alice-Thurman.tenet.edu>  
Subject: Press Release DCC 1995  
To: tapr-bb@tapr.org (TAPR-BB mailing)  
Date: Tue, 23 May 1995 12:26:40 -0500 (CDT)  
X-Mailer: ELM [version 2.4 PL23]  
Content-Type: text  
Content-Length: 9200

Press Release:

June 1, 1995

1995 ARRL Digital Communications Conference  
September 8-10th, 1995  
Arlington, Texas (minutes from DFW airport)

Permission is granted to reprint any or all parts of this press release.

Full text is available on the Internet:

FTP: ftp.tapr.org      WWW: <http://www.tapr.org/tapr>      E-Mail: [tapr@tapr.org](mailto:tapr@tapr.org)

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It's that time again! Time to make your travel plans and put the finishing touches on your work for the upcoming 14th Annual ARRL Digital Communications Conference.

The ARRL Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital elite, but for digitally-orientated amateurs of all levels of experience.

The 1995 Digital Communications Conference will be held on September 8-10th, 1995 in Arlington, Texas. Arlington is just minutes away from the Dallas/Ft. Worth International Airport, which is located in the middle of the country, and airfares have never been cheaper for this conveniently-located conference.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes BBS operators, networkers, DX-Cluster Sysops, software writers, modem designers,

and digital satellite communications enthusiasts. The Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the rich frequency allocations we now have by pushing forward and documenting our achievements. The ARRL Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

What can you expect during the 14th annual Digital Communications Conference ?

- \* A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.
- \* Two workshops, one on APRS on Friday and one on making use of the new PCS (Personal Communications Service) technology on Sunday.
- \* A Texas-sized banquet with a Special Guest Speaker.
- \* SIGs (Special Interest Groups) on Saturday following the banquet.
- \* Informal get-togethers throughout the weekend.
- \* A meeting facility that is perfect for this type of meeting.
- \* Vendor area and informal engineering discussions.
- \* Scores of nearby restaurants and entertainment (Six Flags Over Texas, The Ballpark at Arlington, Wet 'n Wild, golf).
- \* An event at which the most important new developments in amateur digital communications are announced.
- \* Digital 'movers and shakers' from all over the world in attendance.
- \* Plenty of Texas hospitality!

In addition to the presentation of papers on Saturday, two workshops will be held during the conference. On Friday, Keith Sproul, WU2Z, will hold a workshop on APRS packet-location software. Keith is the Chair of the TAPR APRS Special Interest Group, developer of the Macintosh version of APRS, and a leader in the area of APRS technology. This is a unique opportunity to gain insight into this fast growing new digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning Satellites). On Sunday, Dewayne Hendricks, WD8DZP, will conduct a workshop focusing on a survey of Personal Communications Systems and their applications and use in the Amateur Radio Service. Dewayne is an expert in the area of commercial wireless systems; his company WarpSpeed Imagineering, focuses on wireless Internet. This workshop presents an opportunity to learn how Personal Communications Technology (handheld and small business wireless systems) can be used in the amateur service.



The 1995 Digital Communications Conference is co-hosted by Tucson Amateur Packet Radio (TAPR) and the Texas Packet Radio Society (TPRS). TAPR has been active as an international amateur research and development organization since 1981 and was responsible for development of the TNC-2 and other amateur kits and publications. TAPR currently has more than 2500 members, worldwide. TAPR continues to provide leadership in digital amateur radio activities by supporting Special Interest Groups, conferences/meetings, publications, and research and development projects. TPRS has been active as an organization since 1984 and has been responsible for the development of the TexNet network in Texas, Oklahoma, Arkansas, and Missouri. TPRS membership now tops 500 members.

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by July 21, 1995, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to [mweinberg@arrl.org](mailto:mweinberg@arrl.org). Please contact Maty for detailed format requirements.

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL Digital Communications Conference on September 8-10!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: [TAPR@TAPR.ORG](mailto:TAPR@TAPR.ORG)

Sincerely,

Greg Jones, WD5IVD Q President, Tucson Amateur Packet Radio  
Dave Wolf, W05H Q President, Texas Packet Radio Society

Note: If you need handouts or flyers for meetings, contact TAPR about

getting what you need!

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Hotel Information

Conference presentations, meetings, and workshops, will be held at the La Quinta Inn and Conference Center, 825 N Watson Road, Arlington, Tx, (800) 531-5900, (817) 640-4142, Fax (817) 649-7864, intersection of I-30 and Texas 360. Rooms rates are \$53/single, \$58/double, \$63/triple, and \$85+ for suites. When making reservations with the hotel, be sure to indicate you are attending the conference. Six Flags (larger than Disney Land), the Texas Rangers, and several other attractions are within a few miles of the hotel. If you are planning to stay at the hotel, it is highly recommended that you book your room prior to August 25th, 1995 -- a block of 100 rooms is reserved for Friday and Saturday. The hotel provides transportation to and from D/FW International Airport. You should contact the hotel to arrange airport transportation.

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Registration

Contact the TAPR office by Phone, Fax, or e-mail (Internet: [tapr@tapr.org](mailto:tapr@tapr.org)) to pre-register or for additional meeting information. MasterCard and VISA accepted.

Digital Communications Conference

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- Pre-Registration (before August 21st) \$30.00 \*
- Late Registration or at door \$35.00 \*
- \* - Conference Registration includes:  
Conference Proceedings, Sessions, Meetings, and Lunch.
- Saturday Evening Dinner \$17.00 \*\*
- \*\* - Dinner, Speaker, Prize Drawing (Limited Space)

Workshops

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APRS Workshop, Friday, 4pm - 7pm. Conducted by Keith Sproul, WU2Z

- Pre-Registration (before August 21st) \$10.00
- Late Registration or at door \$15.00

PCS Workshop, Sunday, 9:00am - 1:00pm. Dewayne Hendricks, WA8DZP  
Survey of Personal Communications Systems (PCS) Technologies and their

application and use in the Amateur Radio Service

- Pre-Registration (before August 21st) \$10.00
- Late Registration or at door \$15.00

Contact TAPR to register for the DCC.

Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ

85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.

Internet: TAPR@TAPR.ORG

From gjones@tenet.edu Sat May 27 00:00:43 1995

Received: from Alice-Thurman.tenet.edu (Alice-Thurman.tenet.edu [198.213.2.5]) by dingus.n5lyt.datarace.com (8.6.10/8.6.9) with ESMTP id XAA25405; Fri, 26 May 1995 23:59:43 -0500

Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.11/8.6.9) id XAA24090; Fri, 26 May 1995 23:59:41 -0500

From: Greg Jones <gjones@tenet.edu>

Message-Id: <199505270459.XAA24090@Alice-Thurman.tenet.edu>

Subject: '95 DCC Proceedings Deadline

To: tapr-bb@tapr.org (TAPR-BB mailing), bbssig@tapr.org (BBS SIG mailing),  
netsig@tapr.org (NETSIG mailing), aprssig@tapr.org (APRS SIG),  
dsp-93@tapr.org (DSP-93 Build)

Date: Fri, 26 May 1995 23:59:41 -0500 (CDT)

X-Mailer: ELM [version 2.4 PL23]

Content-Type: text

Content-Length: 792

1995 ARRL Digital Communications Conference  
Proceedings Deadline Information  
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Anyone interested in digital communications is invited to submit a paper for publication in the 1995 Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by July 21, 1995, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to mweinberg@arrl.org. Please contact Maty for detailed format requirements.

Deadline: July 21, 1995 (Friday)

Start writing those papers now!

This is your opportunity to let others know what you have been doing.

From gjones@tenet.edu Wed May 31 18:03:55 1995

Received: from Alice-Thurman.tenet.edu (Alice-Thurman.tenet.edu [198.213.2.5]) by dingus.n5lyt.datarace.com (8.6.10/8.6.9) with ESMTP id SAA22617 for <tapr-bb@tapr.org>; Wed, 31 May 1995 18:03:53 -0500

Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.11/8.6.9) id SAA24250 for tapr-bb@tapr.org; Wed, 31 May 1995 18:03:51 -0500

From: Greg Jones <gjones@tenet.edu>  
Message-Id: <199505312303.SAA24250@Alice-Thurman.tenet.edu>  
Subject: PSR Issues #58 and #59  
To: tapr-bb@tapr.org (TAPR-BB mailing)  
Date: Wed, 31 May 1995 18:03:50 -0500 (CDT)  
X-Mailer: ELM [version 2.4 PL23]  
Content-Type: text  
Content-Length: 797

PSR Issue #58 is hitting the mail this week!

Sorry for the delay, but the PSR editor had surgery last month, which pushed everything a little back. We are all happy that Bob is recovering fully.

Deadline for article submission for issue #59 is June 15th, 1995.

If you have an article in mind, you can contact Bob at:

Internet: psr@tapr.org

CIS:J71121,1007

Mail: POB 1902, Elmira, NY 14902-1902

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Tucson Amateur Packet Radio

8987-309 E Tanque Verde Rd #337 \* Tucson, Az \* 85749-9399 \* 817-383-0000  
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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org/tapr  
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